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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/650,481	08/28/2003	Robert B. Lowrance	007024	6152

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EXAMINER

LOWE, MICHAEL S

ART UNIT	PAPER NUMBER
3652	

DATE MAILED: 07/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/650,481

Applicant(s)

LOWRANCE ET AL.

Examiner

M. Scott Lowe

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 March 2006.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 8-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 8-17 is/are rejected.
- 7) ☐ Claim(s) 8 and 13 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Claim Objections

Claims 8 & 13 are objected to because of the following informalities:

In line 5, "about a horizontal axis, rotating the arm" is confusing. It would be clearer as "rotating the arm about a horizontal axis".

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 8,11,13,16, are rejected under 35 U.S.C. 102(b) as being anticipated by
Rochet (US 4,805,759)

Re claims 8,13, Rochet teaches a method of unloading and loading a substrate carrier 36 from and to a moving conveyor 14, comprising:
transporting a substrate carrier 36 via a conveyor 14 that moves past an arm (not numbered, on transfer stations OT1,OT2,etc.) having an end effector 44 coupled to the arm;
about a horizontal axis, rotating the arm (55, figure 3);
substantially matching a velocity of the end effector 44 to a velocity at which the substrate carrier 36 is transported by the moving conveyor 14;
contacting the substrate carrier 36 with the end effector 44; and

lifting the substrate carrier 36 from the conveyor 14.

Re claims 11,16, Rochet teaches the substrate carrier 36 in a vertical orientation (vertical orientation can be read as many things as currently worded) during the transporting step.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 9,10,14,15, are rejected under 35 U.S.C. 103(a) as being unpatentable over Rochet (US 4,805,759) in view of Sugita (US 5,332,013).

Re claims 9,14, Rochet is silent as to whether the end effector has a fixed orientation. Sugita teaches use of automated transfer stations with arms 31 that rotate about a horizontal axis and have an end effector that keeps a fixed orientation. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Rochet to have automated transfer stations (with arms 31 that rotate about a horizontal axis) of Sugita in order to keep a fixed end effector orientation to keep the substrates from moving inside the carrier, and also to automate the transfer stations and allow the them to be more mobile and flexible.

Re claims 10,15, Rochet teaches a cup-shaped end effector 44 oriented horizontally but is silent on the end effector oriented such that an open side of the cup-shaped end

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effector is oriented upwardly. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Rochet to have an upwardly oriented end effector in order to be able to grip carriers that require upwardly oriented end effector in order to be gripped.

Claims 12,17, are rejected under 35 U.S.C. 103(a) as being unpatentable over Rochet (US 4,805,759) in view of Gramarossa (US 6,524,463).

Re claims 12,17, Rochet is silent on the number of substrates in the carrier. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have substituted a single substrate carrier for each carrier in Rochet in view of the teaching of Gramarossa in order to be capable of integrating with known single substrate carrier transport systems.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Bonora (US 5,570,990) teaches a similar method and device.

Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection. Applicant's arguments do not apply to the current use of the Sugita reference.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to M. Scott Lowe whose telephone number is (571) 272-6929. The examiner can normally be reached on 6:30am-4:30pm M-Th.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eileen Lillis can be reached on (571) 272-6928. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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Donald W. Underwood 04/27/06
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PRIMARY EXAMINER